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# SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE  
OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION  
FOR THE ADVANCEMENT OF SCIENCE.

FRIDAY, DECEMBER 18, 1908

## CHEMICAL PRINCIPLES OF SOIL CLASSIFICATION<sup>1</sup>

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It seems appropriate to preface this paper with some direct quotations from a recent publication of national authority which deal with important questions concerning the chemical principles of the soil.

I read from the "Hearings before the Committee on Agriculture of the United States House of Representatives" under date of January 28, 1908.

*Mr. Whitney, Chief of the Bureau of Soils.* The investigations of the Bureau of Soils, as to the causes of the deterioration of soils, and the causes that limit crop production, have changed the view-point of the entire world. The recent investigations of the bureau in soil fertility have changed the thought of the world, and several foreign governments, notably the governments of France, of Japan, of South Africa, and of Australia, have taken up these new ideas of soil fertility. (Pp. 428, 429.)

*The Chairman.* A few years ago the bureau issued a bulletin which was generally construed as meaning to state the proposition that all soils had all the plant food necessary for a maximum growth or crop. The inference, of course, from that was that, such being the case, one soil was as good as another. Now, I would like to know whether the popular conception of that bulletin was wrong or whether the position of the bureau has changed.

*Mr. Whitney.* That touches on the chemical side of the investigations of the bureau, and we have Mr. Cameron here, who did the work, and possibly he might answer that. (P. 439.)

*Mr. Cameron.* I would say that the main opposition to this view has been from Dr. Hopkins, from the University of Illinois.

<sup>1</sup> Address before the American Society of Agronomy at Cornell University, Ithaca, New York, July 11, 1908.

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